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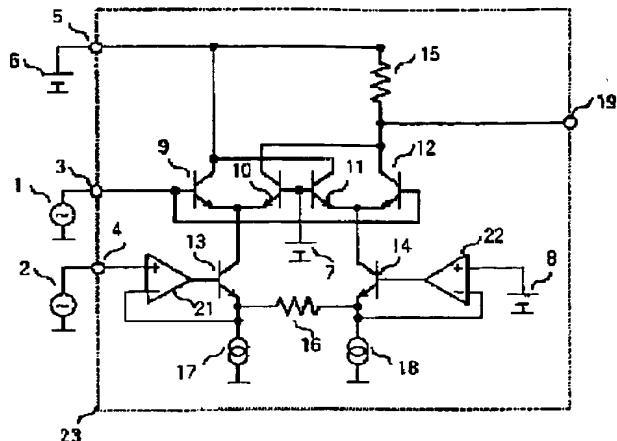
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APPLICANT : MATSUSHITA ELECTRIC IND CO LTD;

INVENTOR : NAKAZAWA SHOGO;

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**TITLE** : RADIO RECEIVER



**ABSTRACT :** PROBLEM TO BE SOLVED: To obtain excellent characteristics which reduce influence by a disturbing signal, by providing a frequency converter which connects an arithmetic amplifier to the input of transistors forming a differential pair to prevent the transistor inside of a multiplier from receiving influence with respect to the variation of inputted voltage so as to suppress the generation of higher harmonic waves.

**SOLUTION:** This receiver is provided with the transistors 13, 14 forming a pair by respectively connecting each emitter to constant current sources 17, 18 and a frequency converter 23 with a first arithmetic amplifier 21 whose output terminal is connected to the base of the transistor 13 and a second arithmetic amplifier 22 whose output terminal is connected to the base of the transistor 14. By connecting the amplifier 21 to a differential input like this, the variation of a signal source 2 is similarly transmitted to the based emitter of the transistor 13 and the operating point of the transistor 13 is not varied. Since the variation of the source 2 is directly transmitted to a resistor 16 by this, the influence of the impedance of the transistor 13 is not received and the generating level of the higher harmonic wave can be suppressed.

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